

NEWS

Geological Society of Minnesota

MINNEAPOLIS, MINNESOTA



Ethel A. Shimck - Editor
2745 Colfax Ave. South
Minneapolis, MN 55408

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Mr. Matt Walton
Minnesota Geological Survey
1633 Euclid Street
St. Paul, Mn.

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GEOLOGY COURSES AVAILABLE IN
EVENING SCHOOL

For those wishing to learn more of the natural world and geology, the University Evening School is offering a number of courses this year.

IO 0261 OVERVIEW OF MODERN GEOLOGY No Credit 42.

A new series of six special lectures plus field trip.

Thursdays, 7-8:40 Oct. 2-Nov. 8 Six meetings Pillsb 110
and a Saturday field trip.

Also offered is the basic course in Physical Geology 5 degree
credits \$97.50 Tue. and Thurs. 6:30-9

For details and the Extension Bulletin, call 373-3195. You may register at 180 Westbrook Hall, main campus, or McPhail Center 12th St. and LaSalle Ave. in Minneapolis. Persons 62 and over may audit all courses free and get credit for a reduced fee.

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ADDRESS CHANGES:

Phil & Peggy Lamb	3511 Ridgewood Dr., Arden Hills 55112 (626 4194)
Elaine Fink	1935 Girard Ave. S./, Mpls. 55403 (377 4862)
Mrs. Lu B. Boney	3/4 St. Gregory Church, Lafayette, MN 56004
Mrs. H. T. Woodward	1920 4th Ave. S., #1404, Mpls. 55404 (871 3991)
Gr. Joan Kain	1908 Selby Ave., St. Paul 55104 (644 9046)
Dwight Robinson	97 S. Victoria St., St. Paul 55105 (227 3394) Home (295 7477) Work

ANNUAL MEETING TO BE AT VIKING VILLAGE

THE ANNUAL MEETING will take place at the Viking Village, 27th Ave. and E. Lake Street, Minneapolis, at 7:00 p.m. on September 29. Those who wish to join other members for dinner should plan to come around 5:30 so that we may proceed promptly.

The main business will be election of three board members. The following have been nominated: Dale Johnson, Elizabeth Ooten, and Conrad Nelson. Additional nominations may be made from the floor.

A slide presentation of the geology of the Twin City area will be given by Marcia Gunville.

First Field Trip Worthwhile

At long last I was able to connect with a field trip. After many years classes in geology, field trips are a must, as well as a good reason to join the Geological Society.

With some trepidation, I arrived at the Macalester parking lot at 8:00 a.m. on a bright Saturday in July. The group was friendly; helping people to get acquainted, and arranging rides with those who would drive in the caravan.

Dr. Webers had an excellent trip planned, and I enjoyed his lectures along with nature's wonders. Being in the field certainly makes it easy to commit the subject to memory.

I managed to resist the temptation of adding to the boxes of fossils already in my basement. The ride home through southern Minnesota's beautiful farmland was another plus.

All in all, a delightful day.

Bertha Ames.

For The Record

GSM is an independent, non-profit organization supported by the dues of members; has had no grants from foundations or government.

Members donate many hours to further the programs, field trips, newsletter, state fair booth etc.

The lectures alone are a great bargain; the field trips offer the most for the least.

We are truly unique.

Field Trip July 19-20

Upper, Middle and Lower Pre-Cambrian Geology

Leader - R. W. Ojakangas

Saturday - 35 people met at Macalester College at 7:00 A.M. to board our chartered bus. We rendezvoused with the professor in Duluth at 10:00 A.M.

We proceeded east over the high bridge to Wisconsin and traveled along the shore of Lake Superior on the old lake bed of Glacial Lake Duluth. All along route #2 the land is flat and somewhat swampy resembling the Red River Valley. We saw several abandoned ore-docks to which iron was delivered formerly from Minnesota iron range.

Reached Amnicon State Park around 11:30 A.M. Also had lunch there beside the Amnicon River. We saw upper Keweenawan sandstones in contact with middle Keweenawan basaltic lava flowing along the Douglas fault. Crossed the Brule River in Wisconsin, made famous by President Coolidge, and on to Ashland. At Ashland are ore docks from which Gogebic range hematite was shipped for processing.

Ironwood - At the Newport Mine east of Ironwood, we saw an Archean-Proterozoic unconformity where the Palms formation (quartzite) rests upon archean granite - 2700 million years old.

Red clay is a commonly visible feature of the landscape; when wet, it is sticky-goopy. Around 5:30 we stopped in Wakefield near a bakery where we purchased goodies.

On the roadside we viewed some more interesting exposures, and thence to Indian Head Lodge near Wakefield, Michigan. The lodge is high up in the hills. The sunny 80 degree temperatures with very little wind made for a pleasant trip. During the night (Saturday) rain fell until around 4:00 A.M. In the morning it was foggy and cool at first, but later the sun broke through and the air was quite humid and still warm even with wind off Lake Superior. At Indian Head we had good meals and comfortable rooms.

On Sunday, the first stop was Radio Tower Hill; a steep one and a long climb. At the top we saw a tilted exposure of the Palms quartzite. From there we could see several hills that are basaltic lava flows. We stopped to look at the lava flows at an abandoned quarry behind Hakamis' garage. Some bent pipe amigdules were visible near the base of the quarry.

The next area was Presque Isle Park in the Porcupine Mountains Wilderness State Park. The lower beds of the Freda sandstone hold up the main waterfalls on Presque Isle River below which to the north is the Nonesuch formation. From a bridge we observed pot holes in the river as it flows to Lake Superior. We had two climbs and a hike at Presque Isle stop. Ate lunch in bus to save time - 1:00 to 1:30.

Shaw on Volcanoes



There have been numerous volcanic eruptions in the U.S., and if one means the area of land currently defined as the U.S.A. and the whole of geologic time, then volcanic eruptions have been very widespread. In fact, the Twin Cities area is underlain by volcanic rocks (under the younger sedimentary rocks) which are about 1.1 billion years old. These rocks can be seen at Taylor's Falls.

Or perhaps greater interest are historical or at least more recent eruptions related to readily discernible volcanoes and volcanic features.

Mount St. Helena is one of a number of comparatively recent volcanoes (sometimes called the Cascade Volcanoes) which have been intermittently active for perhaps the last 500,000 to 1,000,000 years. Mount St. Helena is one of the youngest of these and is thought to be one of the more active in recent times. St. Helena has erupted in the historical past and was intermittently active from about 1825 to 1950. The geologic record shows activity at Mount St. Helena at numerous times in the past.

The last volcanic eruption in the continental U.S. occurred from 1914 to 1917 at Mount Lassen in northern California, and historical activity is also known at Mount Baker in northern Washington in about 1845. Almost all of the Cascade Volcanoes have exhibited some eruptive activity during the last 2000 to 3000 years.

In addition, volcanic activity is also known in Alaska, where the eruption of Katmai in 1912 gave rise to the Valley of 10,000 Smokes. Hawaii is well-known for its fairly frequent volcanic activity (every few years) but of a generally less explosive type.

The Hawaiian volcanoes are among the most carefully monitored for potential volcanic eruptions. The Cascade Volcanoes are not as closely monitored because they are comparatively inactive, although the recent events at Mount St. Helena show that there are significant possibilities for volcanic outbreaks. As soon as Mount St. Helena showed signs of activity an effort was made to place instruments on and observe the volcano for possible eruption.

George H. Shaw, associate professor, Department of Geology and Geophysics, University of Minnesota, Minneapolis.

Minneapolis Tribune 6-9-80.

HELP WANTED

Willing hands for writing, typing, assembling and mailing the G & M Newsletter, quarterly.

Public Information Committee needs 1 person from St. Paul and 1 from Minneapolis to send out notices of lectures to the media: dailies, weeklies, radio etc. Twice monthly.

Call Ethel Shimek 873-4030

From: The Journals of Lewis and Clark,
As edited by Bernard DeVoto:

On June 20, 1803, when President Jefferson gave Meriwether Lewis his secret instructions to explore a route to the Pacific Coast, he asked him to observe among other "objects worthy of notice....Volcanic appearances"...

As Lewis and Clark started down the Columbia River on October 18, 1805, they saw first Mt. Hood, and then on the 19th, what they took to be Mt. St. Helens, but which probably was Mt. Adams.

These great peaks had already been put on maps by Vancouver, the English explorer who sighted them from the ocean side in 1792.

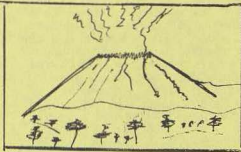
On November 4th, Lewis wrote that they had a "full view from about 90 miles away of Mt. Helien" (St. Helens) perhaps the highest pinical in America". "Covered with snow, it rises something in the form of a Sugar Loaf".

On the return trip up the River on April 2, 1806 as they passed the mouth of the Multnomah River (Willamette), Mt. St. Helens was noted again, along with Mts. Jefferson, Hood and Adams. These mountains had already been named possibly by early fur traders.

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ADDITIONS TO THE ROSTER

John Podolinsky	10226 Mildred Terrace Minnetonka 55343
Richard A. Hallberg	6607 18th Ave. S. Minneapolis 55423
Harriet M. Fraser	801 City View Drive Minnetonka 55343



Field Trip, cont

Thence to Lake of the Clouds and another climb at the top of which was a grand view of a river and lake at the foot of the hill. The drive through the Porcupine Mountains Wilderness State Park passes through virgin stands of pine and hemlock, as well as hardwood forests, mainly maple and oak. It is a real wilderness area.

The last stop was at Union Bay Campground on Lake Superior where we saw great boulders of the Copper Harbor conglomerate. On the way out we passed the White Pine Copper Mine, the only producing mine at present.

Arrived at Duluth at 8:00 P.M. and had a meal at Perkins Pancake House. Arrived at Macalester at 10:00 P.M. and home at 11:00 P.M.

Geological Society of Minnesota

1980 - 1981 PUBLIC LECTURE SERIES

133 Physics Building, University of Minnesota,
Monday Evenings, 7:30 P.M.

September 29 ANNUAL MEETING -- 7:00 P.M.
(Smorgasbord dinner - 5:45 - 6:45)
Viking Village, 27th & Lake St., Mpls.

SERIES THEME - CLOUD TOP TO OCEAN DEPTHS : THE GEOLOGY OF WATER

October 13 Bruce Watson, author, lecturer, and Consulting
Meteorologist, will give 3 lectures on:

October 27 OUR PRECIPITATION AND HOW WE GET IT
November 10 -----

November 24 Dr. Eville Gorham, University of Minnesota, will
share his expertise in a special lecture on our
newest environmental concern

ACID RAIN : ITS ORIGINS AND EFFECTS

December 8 MT. ST. HELENS UPDATE

January 12 will be the December topic of Dr. David Southwick,
Minnesota Geological Survey. His January and February
January 26 topic will be

February 9 WATER AND THE GROUND -- what water does and what
happens to water when it reaches the surface and
February 23 subsurface of the earth.

March 9 Dr. Tom Johnson, Oceanographer, University of
Minnesota, will bring us a new perspective on
March 23 geology during our last 3 lectures

April 13 THE OCEANS : WATER'S LAST RETREAT

April 27 SPRING BANQUET -- 6:00 P.M.
(Location to be announced)



Geological Society of Minnesota

BACKGROUND INFORMATION

THE GEOLOGICAL SOCIETY OF MINNESOTA is an organization interested in the story of the earth, what it is made of and how it is put together. The study of geology, the learning about the earth's past and present history involving billions of years constant change, is fascinating to a large number of people. Members of the Geological Society of Minnesota are such people who want to further their understanding of the processes creating these changes.

LECTURES AND LABORATORY SESSIONS are held on a regular basis during the fall, winter and spring seasons. Generally, an area of study is pursued in depth over several meetings, with presentations being given by professional geologists who either teach on local college campuses or who practice in some other capacity. All lectures are presented on the second and fourth Mondays, October -April at 7:30 p.m. in a room reserved on the University of Minnesota Campus. A discussion period with coffee and refreshments is held during lecture presentation. Also, from time to time selected films are announced and shown. Specimens may be brought to the lectures for examination and identification. Whenever possible, informal laboratory sessions are held on alternate Mondays throughout the lecture series. Announcements concerning them are given at the regular meetings.

FIELD TRIPS fill out the schedule during the summer months. These may be one day tours or more lengthy and elaborate trips. They are led by geology professors or others knowledgeable about the areas being visited. These field trips offer an opportunity to observe first-hand the earth processes forming the landscape and to gain experience at evaluating them.

THE SOCIETY is interested in furthering the understanding of geology by the public with particular emphasis on the geology of Minnesota. It has worked on a number of projects with this aim in mind. Roadside plaques at 33 geologically interesting locations throughout the State of Minnesota have been written and installed under its sponsorship. Exhibits on the State's geology are regularly set up and maintained at the Minnesota State Fair and at Mineral Club shows. Club members have served as speakers to school classrooms and at meetings of local organizations. The efforts of the Society concerning educational projects are ongoing.

MEMBERS OF THE SOCIETY come from all walks of life, and represent all age groups. They need have no particular scientific background, or professional interest to belong to the organization. They are united mainly in their enthusiasm for geology as an absorbing intellectual activity and a stimulating hobby.

THE GEOLOGICAL SOCIETY OF MINNESOTA MEMBERSHIP YEAR begins January 1, with yearly dues payable any time beginning with the fall Annual Meeting. Membership includes subscription to the organization newsletter covering the Society's activities. We invite you to participate.

MEMBERSHIP CHAIRPERSON

Marjorie McGladrey
Rt. 1, Box 17 (F)
Elko MN, 55020
Phone 461-2676

MEMBERSHIPS:

Adults	\$ 7.00
Husband and Wife	\$10.00
Students	\$ 2.00

Official Address:

Mary Kimball - 612-644-6429
1711 Marshall Ave., St. Paul, MN 55104